

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Michael J. Rosendaul, Wayne Isbell, James G. Winkel, and David W. Buck

Application No.: **10/707,051**

Group No.: 2878

Confirmation No.: **1050**

Filed: **November 18, 2003**

Examiner: D. N. Monbleau

For: NIGHT VIEWER ACCOMODATING MULTIPLE IMAGE TUBE TYPES

**Commissioner for Patents
Washington, D.C. 20231**

ATTENTION: Board of Patent Appeals and Interferences

**APPELLANTS' REPLY BRIEF
(37 C.F.R. § 41.41)**

Introduction

Appellants submit this reply brief to the Examiner's Answer, mailed June 13, 2006, and in furtherance of the Notice of Appeal, filed in this case on January 27, 2006.

ARGUMENTS

REJECTIONS UNDER 35 U.S.C. § 102

The Examiner's Answer in this Appeal repeats the prior arguments that Claims 1, 3, 4, 9, 11, 13, and 14 are anticipated by *Bowen et al.* (US 6,150,650). The *Bowen* reference describes a device and a method for providing user adjustable variable gain for a specific image intensifier tube type mounted within a night vision device.

While *Bowen* teaches that multiple image intensifier tube types exist, *Bowen* fails to disclose that a single night vision device *may be adapted to use multiple image intensifier tube* types as replacements for the original equipment tube. *See* Cols. 1-2. *Bowen's* device, unlike that of the present invention, only teaches a night vision device that uses a single tube type and the calibration differs from tube to tube. While the *Bowen* tubes may be changed, the tube types are not changed or replaceable, thereby limiting the usefulness in field use of the night vision devices where the same tube type may not always be available. As *Bowen* teaches, an "image intensifier tube is subjected to factory calibration for providing an optimum output during operation, wherein said calibration undesirably differs from tube to tube." Col. 2, lines 48-62.

Claims 1 and 11

Claims 1 and 11 are the independent claims in this Appeal. For the purpose of brevity, Appellants will address comments in this Reply Brief to exemplary claims 1 and 11 only, but such comments should be considered applicable to all the claims on appeal since the dependent claims include the limitations of the independent claims and add additional limitations.

To repeat for the Board's convenience, Independent Claim 1 recites the following elements (also comparably found in independent method claim 11), the most pertinent to this discussion being presented in bold type for the convenience of the Board:

1. An adaptive electrical circuit unit for use in a night viewer system of the type that includes an image intensifier tube and a compatible power source electrically connected to the image intensifier tube, the invention comprising:
 - a voltage gain detection circuit unit operably connected to the image intensifier tube for detecting **multiple selected types of image intensifier tubes** and producing an output gain signal appropriate to the **detected image intensifier tube** for controlling the gain of the detected image intensifier tube.

The Examiner's Answer alleges that "*Bower* discloses in claim 1 an electrical unit comprising ... for detecting **multiple selected types** of image intensifier tubes (claim 1 lines 6-11[]).” Examiner's Answer, page 3 [Emphasis Added] What *Bowen* does disclose in claim 1 is only:

“whereby **when one tube is substituted for another, said difference in calibration causes non-optimal performance**, a method for providing a user adjustable variable gain for said night vision device such that said variable gain is substantially insensitive to **tube substitutions**, comprising the steps of.” [Emphasis Added]

When *Bowen* is read in its entirety, the use of multiple image tube *types* in the night vision device of the Applicants' invention as claimed is neither disclosed nor suggested by *Bowen* that merely discloses substitution of "one tube for another." For example, *Bowen* further discusses "interchangeable tubes" in the Summary of the Invention:

“A method for providing user adjustable variable gain for a night vision device which utilizes an image intensifier tube, wherein said image intensifier tube has a given life expectancy, **said image intensifier tube is subjected to factory calibration for providing an optimum output during operation, wherein said calibration undesirably differs from tube to tube and is adjustable by variable control means coupled to the tube**, whereby **when one tube is substituted for another said difference in calibration causes non-optimum performance**, said method including the steps of: determining minimum and maximum gain limits associated with said optimum output of said night vision device; factory calibrating gain limiting means according to said determined minimum and maximum gain limits, wherein said gain limiting means are associated with said image intensifier tube and for limiting said variable control

means; and, tethering said gain limiting means to said image intensifier tube.” Col. 2, line 45-62. [Emphasis Added]

Applicants suggest that the claimed structure of the present invention is neither identical to nor disclosed by the *Bowen* device. Therefore, *Bowen* cannot anticipate the present claimed invention.

Substituting “one tube for another” is simply not the same as “detecting multiple selected types of image intensifier tubes and producing an output gain signal appropriate to the detected image intensifier tube for controlling the gain of the detected image intensifier tube.” An analogy for substituting “one tube for another” is like exchanging one quarter (25 cent piece) for another quarter. “Multiple selected types of image intensifier tubes” is like giving change for the quarter of two dimes and a nickel; or, five nickels; or, two dimes and five pennies; etc. One still has twenty five cents of value, but the weight in one’s pocket changes.

Moreover, the allegedly prior art device lacks the functional characteristics of the claimed structure of the method claim in the present application. The *Bowen* device does not have the capability to accept multiple image intensifier tube types and to provide the proper gain for the type of tube used or selected.

Even if the *Bowen* patent incidentally showed a similar arrangement of parts, if that arrangement is neither claimed nor designed to perform the function of the present invention, neither patent can act as an anticipation.

REJECTIONS UNDER 35 U.S.C. § 103

The Patent Office has the initial burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103(a) and must thus meet three criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the references or combine reference teachings. Second, there must be a reasonable expectation of success. Third, the applied art must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Appellants assert that the rejections do not satisfy these criteria.

In determining the propriety of a case for obviousness, it is necessary to ascertain whether the reference teaching(s) would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification. *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Applicants' invention is directed toward solving the disadvantage that night vision devices heretofore were designed to accept a single type of image intensifier tube and were not adaptable to accept multiple types of image intensifier tubes. Prior to the present invention the user of a night vision device had to replace the installed image intensifier tube with a tube of the same type, which may not always be readily available. Since night vision devices are often used by members of the military during operations and maintenance supplies may be limited, there is a need for the night vision device to be adapted to use another tube type that might be available. *See Bowen* which addressed only the issue of interchanging one tube with another tube of the same type. *See Bowen*, column 2, lines 23 through 43 and other places that talk about the differences in calibration between two tubes that need to be specifically calibrated for the system since the tube itself "does not offer variable gain." *Bowen*, column 2, lines 17.

Even if one were to insert (and there is no suggestion of doing so in *Bowen*) another image intensifier tube type in *Bowen*'s night vision device, the night vision device would not have the independent capability to determine the type of replacement tube and establish the proper electronic signals necessary for operation of that specific tube type different than the tube type being replaced.

Conclusion

In conclusion, for the above reasons Applicants respectfully request the Board of Patent Appeals and Interferences to reverse the rejection of claims 1-18 by the Examiner. The application should be returned to the Examiner with directions to allow these claims and pass this application to issue.

Respectfully submitted,



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